

20.4: (x) of Complex #'s

★ Complex numbers are binomials.
Use FOIL to (x) complex #'s

$$(a+bi)(c+di)$$

- Always express your result in Simplest $a+bi$ form.
- Recall: $i^2 = -1$, always replace i^2 with (-1)

Ex: Express the product of $2-4i$ and $5-3i$ in simplest $a+bi$ form. (use your calc. to check)

Recall: Conjugates are binomials that differ only by the connecting sign.

$$\text{Ex: } 1 + \sqrt{3}, 1 - \sqrt{3}$$

$$-\frac{1}{2} + 2i, -\frac{1}{2} - 2i$$

Ex: Find the product of $(-3-4i)$ and its conjugate. Express the result in simplest form. (use your calc. to check.)

★ the product of any complex number and its conjugate is always a real #.

This concept will help us with (÷) of complex #'s

Homework: Pg 935: 3-48 (:3)